

LIST OF CURRENT CLAIMS

1. (Currently Amended) A heater unit to be mounted on a valve having flow path forming sections including a valve body connected to a fluid piping system through joints, and having an actuator connected to the valve body, the unit comprising:

a main body constructed in the form of a housing having pipe through-holes and an actuator exposing opening, ~~the actuator exposing opening covering at least a part connecting the body and the actuator;~~ and

a heater unit in the main body, wherein the heater unit comprises:

a direct heating section configured to heat the body of the valve through direct contact heating; and

a radiant heating section, surrounding the direct heating section, and extending to an area of the flow path forming sections excluding an area which is brought into direct contact with the direct heating sections and joints, enclosed by the main body, configured to heat the inside of the main body by radiant heat,

wherein the flow path forming sections including the body and the part connecting the body and the actuator and joints are entirely and closely covered by the main body so that only the fluid piping system is exposed from the pipe through-holes, and the flow path forming sections excluding the area which is brought into direct contact with the direct heating sections and the joints, enclosed by the main body, are constructed so as to be heated by the radiant heat from the radiant heating section.

2. (Previously Amended) The heater unit according to Claim 1, wherein the valve is a two-way valve, in which the body is placed between a pair of pipes disposed linearly, and connected to the pipes through a pair of joints;

the main body comprises a pair of housing halves which are fitted together with the body and the pair of pipes being sandwiched therebetween from both sides of the pair of pipes;

the pipe through-holes and the actuator exposing opening are formed by fitting together a plurality of cutouts provided on the edges of each of the housing halves;

the heater comprises flat panel heaters, each installed inside of each of the pair of housing halves such that the flat panel heaters face with each other across the valve when the pair of housing halves is fitted together; and

the direct heating section and radiant heating section are provided on each of the opposing surfaces of the flat panel heaters.

3. (Previously Amended) The heater unit according to Claim 2, wherein the direct heating section is provided on each of the opposing surfaces of the flat panel heaters at the same position as the actuator exposing opening in the longitudinal direction of the pair of pipes.